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G DIP

1. Project Title: Crisis Data Base Exchange MethodologySubmitting Agency: DIA Decision Unit No.: 2735

II. <u>Costs</u> (Thousands of dollars)	<u>FY 1983</u>	<u>FY 1984</u>
R&D	500	400
O&M (Incl. Leases)	200	-
Total	<u>700</u>	<u>400</u>

III. Description of Project

A. Statement of need.

The intelligence community has for years been struggling with the problems created by the lack of a common perception of a crisis situation. In large measure, this situation is attributable to the lack of a commonly accessible or available finished intelligence information data bases on the crisis area. Principal among these data bases in DoD are those formatted files relating to orders of battle and installations. These data bases form the basis for military, military/political and military/economic assessments of the crisis situation used for a wide variety of policy decisions, constitute principal inputs to military operations planning and execution, and are used for current situation presentation/displays of the crisis area to senior level defense officials.

The discrepancy between data base holdings at DIA and other major DODIIS sites during the course of a crisis creates a vicious cycle which impacts on the productivity of the analytical resources working the problem. The purpose of this project would be to test a concept for managing the required uniform distributed crisis data base and its supporting technology.

B. Who will accomplish?

The Executive Directorate for DODIIS Engineering (DIA RSE) would conduct the project with contractor assistance. The project objectives would be to demonstrate the viability and utility of the proposed conceptual and technological solution. It will provide a unique ability to assess some of the DODIIS Engineering Initiatives early in the development cycle while providing some tangible solutions to existing Department of Defense Intelligence Information Handling problems.

C. What is to be developed?

A test and demonstration prototype crisis data base architecture that will support a transaction-by-transaction data base exchange methodology based on automated message handling (AMH) technology. The prototype will use existing ADP and telecommunications facilities wherever feasible and lease other specialized equipment as necessary. SAFE technology will be used wherever feasible.

D. How will it be done?

Under this project, the automatic data base change process would be tested through the full formatted file update cycle using an advanced technological hardware based AMH component. Three sites would be involved--two as producers and one as consumer.

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DIA review completed.

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E. How is it innovative?

The project is innovative in that it takes a concept from one narrow data base arena and applies it to a much broader problem using an untried though highly promising technology.

IV. Intelligence Community Applicability

A. Who can use the results of the initiative?

All intelligence community sites who must exchange data base transactions--either in the form of intelligence data or analyzed intelligence information--can benefit from the results of this project.

B. What are the effects?

There will be several positive effects: the basic problem of information commonality and timeliness will be resolved, interoperability and the survivability of data bases will be greatly enhanced, and analyst productivity will be increased. Several other potential effects will also be evaluated: the impact on telecommunications techniques and problems involved in handling the "initial load" of a crisis data base, techniques for dynamically modifying the data base exchange process during the course of a crisis, and techniques for handling "collisions" or "near-collisions" of data base change transactions from different sites.

V. Intelligence Consumer Benefits

A. Who benefits?

All consumers and users of defense intelligence information will benefit from a more timely, integrated, and fully coordinated product that has been jointly evaluated at both the national and theater levels. Positive procedural or technological capabilities derived from this evaluation will be implemented on a community basis under DODIIS engineering initiatives.

B. What are the effects?

The effects of implementing this crisis data base concept on a comprehensive basis will be to increase the utility of the intelligence product to the operational planner and decision maker and to enhance their confidence in the intelligence community at large.

VI. Probability of Success

There are several components to the proposed project each with their own probability of success. There is the conceptual component with a moderate to high probability of success. There is a technological component with an even probability of success. Of utmost importance, there is a procedural component with a less-than-even chance of success since the concept of operations to establish and maintain data bases in a crisis environment is not well developed or understood. Efforts to define this concept have generally failed due to uncertainties over the capabilities and flexibility of supporting ADP/telecommunications technology. On the other hand, efforts to specify the ADP/T technology have not progressed since they lacked a clear statement of requirements and a supporting concept of operations. This project will allow the two sets of requirements to be tested and developed in a joint effort in a test environment.

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